

Product datasheet

Anti-SHC antibody ab103134

2 Images

Overview

Product name	Anti-SHC antibody
Description	Rabbit polyclonal to SHC
Tested applications	Suitable for: WB, IHC-P
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide conjugated to KLH, corresponding to a region within N terminal amino acids 72-101 of Human SHC.
Positive control	MDA-MB468 cell lysate; Human breast carcinoma

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at 4°C (up to 6 months). Store at -20°C long term.
Storage buffer	Preservative: 0.09% Sodium Azide Constituents: PBS
Purity	Ammonium Sulphate Precipitation
Purification notes	ab103134 is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab103134** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/50 - 1/100. Predicted molecular weight: 63 kDa.
IHC-P		1/50 - 1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Target

Function

Signaling adapter that couples activated growth factor receptors to signaling pathways. Participates in a signaling cascade initiated by activated KIT and KITLG/SCF. Isoform p46Shc and isoform p52Shc, once phosphorylated, couple activated receptor tyrosine kinases to Ras via the recruitment of the GRB2/SOS complex and are implicated in the cytoplasmic propagation of mitogenic signals. Isoform p46Shc and isoform p52Shc may thus function as initiators of the Ras signaling cascade in various non-neuronal systems. Isoform p66Shc does not mediate Ras activation, but is involved in signal transduction pathways that regulate the cellular response to oxidative stress and life span. Isoform p66Shc acts as a downstream target of the tumor suppressor p53 and is indispensable for the ability of stress-activated p53 to induce elevation of intracellular oxidants, cytochrome c release and apoptosis. The expression of isoform p66Shc has been correlated with life span (By similarity). Participates in signaling downstream of the angiopoietin receptor TEK/TIE2, and plays a role in the regulation of endothelial cell migration and sprouting angiogenesis.

Tissue specificity

Widely expressed. Expressed in neural stem cells but absent in mature neurons.

Sequence similarities

Contains 1 PID domain.
Contains 1 SH2 domain.

Domain

In response to a variety of growth factors, isoform p46Shc and isoform p52Shc bind to phosphorylated Trk receptors through their phosphotyrosine binding (PID) and/or SH2 domains. The PID and SH2 domains bind to specific phosphorylated tyrosine residues in the Asn-Pro-Xaa-Tyr(P) motif of the Trk receptors. Isoform p46Shc and isoform p52Shc are in turn phosphorylated on three tyrosine residues within the extended proline-rich domain. These phosphotyrosines act as docking site for GRB2 and thereby are involved in Ras activation.

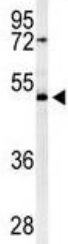
Post-translational modifications

Phosphorylated by activated epidermal growth factor receptor. Phosphorylated in response to FLT4 and KIT signaling. Isoform p46Shc and isoform p52Shc are phosphorylated on tyrosine residues of the Pro-rich domain. Isoform p66Shc is phosphorylated on Ser-36 by PRKCB upon treatment with insulin, hydrogen peroxide or irradiation with ultraviolet light (By similarity). Tyrosine phosphorylated in response to FLT3 signaling (By similarity). Tyrosine phosphorylated by activated PTK2B/PYK2 (By similarity). Tyrosine phosphorylated by ligand-activated ALK. Tyrosine phosphorylated by ligand-activated PDGFRB. Tyrosine phosphorylated by TEK/TIE2. May be tyrosine phosphorylated by activated PTK2/FAK1; tyrosine phosphorylation was seen in an astrocytoma biopsy, where PTK2/FAK1 kinase activity is high, but not in normal brain tissue. Isoform p52Shc dephosphorylation by PTPN2 may regulate interaction with GRB2.

Cellular localization

Cytoplasm; Mitochondrion matrix. Localized to the mitochondria matrix. Targeting of isoform p46Shc to mitochondria is mediated by its first 32 amino acids, which behave as a bona fide mitochondrial targeting sequence. Isoform p52Shc and isoform p66Shc, that contain the same sequence but more internally located, display a different subcellular localization and Mitochondrion. In case of oxidative conditions, phosphorylation at 'Ser-36' of isoform p66Shc, leads to mitochondrial accumulation.

Images

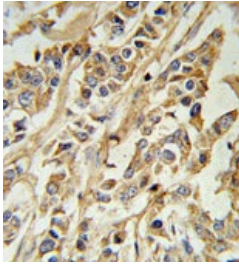


95
72
55
36
28

Anti-SHC antibody (ab103134) at 1/50 dilution
+ MDA-MB468 cell lysate at 35 µg

Predicted band size : 63 kDa

Western blot - SHC antibody (ab103134)



ab103134, at 1/50 dilution, staining SHC in formalin-fixed, paraffin-embedded Human breast carcinoma by Immunohistochemistry using a peroxidase conjugated secondary antibody and DAB staining.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - SHC antibody (ab103134)

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